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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,837

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Hitoshi Asahi

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EXAMINER

VELASQUEZ, VANESSA T

ART UNIT

PAPER NUMBER

1793

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,837	<b>Applicant(s)</b> ASAHI ET AL.	
	<b>Examiner</b> Vanessa Velasquez	<b>Art Unit</b> 1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 13-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>Aug. 8, 2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Restriction***

Applicant's election without traverse of Group I, claims 1-12, in the reply filed on January 10, 2008 is acknowledged.

Claims 13-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies of foreign applications JP 2004-042838 and JP 2004-258862, filed in Japan, have been received.

### ***Information Disclosure Statement***

One (1) information disclosure statement (IDS) was received on August 8, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashima et al. (JP 10-176239, English abstract and machine translation).

Regarding claims 1 and 7, Kashima et al. teach a steel sheet (plate) comprising a two-phase microstructure of martensite and ferrite (abstract). The martensitic phase (maximum 20%) is embedded in the main ferritic phase (the balance) (para. [0024]), and the size of the martensitic grains is on the order of microns (para. [0025]), making the martensite relatively fine in size. The small decrease in the yield strength of the steel after formation into a tube (pipe) signifies a reduced Bauschinger effect (para. [0005], [0024]).

Still regarding claim 7, the steel sheet of Kashima et al. is to be utilized for manufacturing tubes (pipes) (abstract, para. [0006]).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 2-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima et al. (JP 10-176239, English abstract and machine translation).
- Regarding claims 2 and 8, the martensite grains have an average size of 10 microns or less (para. [0025]), and are present in amount of 1-20 area % (para. [0024]), which overlaps the claimed range. The overlap between the range taught by the prior art and the claimed range is sufficient to establish a *prima facie* case of obviousness (MPEP § 2144.05).
- Regarding claim 3, Kashima et al. do not expressly teach that the ratio of the proportional limit of the compression stress-strain curve before and after the steel sheet is subjected to deformation is 0.7 or more. However, it is well-established that “[w]hen

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the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent" (MPEP § 2112.01). In the instant case, the microstructure and chemical composition of the steel by Kashima et al. overlap that of the claimed invention. Therefore, any properties associated therewith, such as proportional limit of the compression stress-strain curve, are also expected to be properties of the product of the prior art even though the claimed properties are not explicitly recited by the prior art.

Regarding claims 4 and 10, Kashima et al. teach that the steel sheet comprises the following elements, in percent by weight (abstract):

Element	Claims 4 and 10	Kashima et al.
C	0.03 - 0.30	0.02 - 0.12
Si	0.01 - 0.8	0.1 - 1.5
Mn	0.3 - 2.5	0 - 2.0
P	0 - 0.03	0 - 0.05
S	0 - 0.01	0 - 0.01
Al	0.001 - 0.1	0.01 - 0.10
N	0 - 0.01	Not taught
Fe & impurities	balance	balance

The overlap between the ranges taught by the prior art and the claimed ranges is sufficient to establish a *prima facie* case of obviousness because both the prior art and the claims are drawn to steel sheets for use in pipes exhibiting a minimized Bauschinger effect (MPEP § 2144.05).

With regard to the nitrogen content, Kashima et al. do not teach the presence of nitrogen; therefore, nitrogen will be regarded as being absent (i.e., zero percent by weight) in the steel sheet. Zero percent lies within the claimed range and thus still reads on the claimed invention.

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Regarding claims 5 and 11, Kashima et al. teach that the steel sheet may optionally further contain the following elements, in percent by weight (abstract, para. [0009]):

Element	Claims 5 and 11	Kashima et al.
Nb	0 - 0.1	0 - 0.08
V	0 - 0.3	0 - 0.08
Mo	0 - 0.5	0.1 - 1.5 (Mo+Cr)
Ti	0 - 0.1	0 - 0.08
Cr	0 - 1.0	0.1 - 1.5 (Mo+Cr)
Ni	0 - 1.0	0 - 1.0
Cu	0 - 1.0	0 - 1.0
B	0 - 0.003	Not taught
Ca	0 - 0.004	0 - 0.005

With regard to the boron content, Kashima et al. do not teach the presence of boron; therefore, boron will be regarded as being absent (i.e., zero percent by weight) in the steel sheet. Zero percent lies within the claimed range and thus still reads on the claimed invention.

Regarding claims 6 and 12, Kashima et al. do not expressly teach that the Charpy V-notch value in the transverse direction at -20°C is at least 40 J. Kashima et al. also do not teach that the ratio of the proportional limit of the compression stress-strain curve before and after the steel sheet is subjected to deformation is 0.7 or more. However, it is well-established that "[w]hen the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent" (MPEP § 2112.01). In the instant case, the microstructure and chemical composition of the steel by Kashima et al. overlap that of the claimed invention. Therefore, any properties associated therewith, such as Chapry V-notch

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values or proportional limit of the compression stress-strain curve, are also expected to be properties of the product of the prior art even though the claimed properties are not explicitly recited by the prior art.

Regarding claim 9, Kashima et al. do not expressly teach that ratio of the proportional limit of the compression stress-strain curve in the circumferential direction before and after expansion of the steel pipe is 0.7 or more. However, it is well-established that "[w]hen the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent" (MPEP § 2112.01). In the instant case, the microstructure and chemical composition of the steel by Kashima et al. overlap that of the claimed invention. Therefore, any properties associated therewith, such as proportional limit of the compression stress-strain curve, are also expected to be properties of the product of the prior art even though the claimed properties are not explicitly recited by the prior art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Velasquez whose telephone number is 571-270-3587. The examiner can normally be reached on Monday-Friday 9:00 AM-6:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached at 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

/Vanessa Velasquez/  
Examiner, Art Unit 1793